

ABSTRACTS

A linear actuator, in which a plurality of electromagnets where coils are wound around magnetic materials are provided so as to face each other in a manner where the polarities N and S of the electromagnets alternate at the time of excitation, and magnetic poles of a plurality of permanent magnets that are aligned so as to form a movable member are placed in positions that face the plurality of magnetic poles, in which the permanent magnets extend beyond the portions where the magnetic poles of the electromagnets are provided so as to face and therefore effects are attained that a stable force of magnetic attraction in the direction of the stroke is obtained and peeling and cracking of the permanent magnet are prevented.